

Please amend the paragraph at p. 1, lns. 22-25 to read as follows:

A2  
Physical objects are any objects which can have an effect in the physical world. They are most preferably massive bodies of any size, ranging from less than one gram up to several tons. However, other objects, for example a computer program or a data file are also physical objects for purposes of this application.

Please delete the text "13. November 2000" from the footer of each page of the application.

Please amend the paragraph at p. 2, lns. 2-7 to read as follows:

A3  
Current control mechanisms for the delivery of packages, for example within companies or to customers are very much based on special proprietary solutions. Work is ongoing to standardise the control mechanisms, e.g. logistics and workflow management systems, e.g. the Workflow Management Coalition (WFMC). Several companies are working on dedicated software for package delivery systems.

Please amend the paragraph at p. 3, lns. 13-18 to read as follows:

A4  
Due to the enormous growth of the Internet and the number of subscribers, the Internet Protocol (IP) is widely deployed. IP is the network layer protocol for the Internet and many other networks. IP, together with several additional protocols, such as, for example, Open Shortest

Path First (OSPF) and Internet Control Message Protocols (ICMP), provides network services to the upper layers.

Please amend the paragraph at p. 3, lns. 23-27 to read as follows:

The IPv6 standard provides additional services. These services include an improved security handling which guarantees authentication and privacy, an enhanced type of service based routing, a flow label routing which is similar to virtual circuits and an unlimited amount of IP addresses including an improved hierarchical addressing scheme.

Please amend the paragraph at p. 3, lns. 29-32 to read as follows:

Furthermore the IPv6 standard provides anycasting. This network service is like multicasting in that a destination is a group of addresses, but instead of trying to deliver the data packet to all of them, it tries to deliver it to just one, usually the nearest one.

Please amend the paragraph at p. 4, lns. 14-20 to read as follows:

Several major Dutch cities, for example Leiden, Utrecht, Tilburg, Arnhem, Nijmegen, are currently investigating the applicability of such underground distribution networks. An investigation that was concluded in 1998 has indicated that underground distribution networks like OLS (Ondergronds Logistiek Systemen), as they are called in the Netherlands, are very

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feasible. In Hoofddorp a decision will be made before the next century on whether such a system will be implemented.

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Please add the text "Summary of the Invention" at p. 4, ln. 32, just before the last partial paragraph of that page.

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Please delete the paragraph at p. 5, lns. 3-6:

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Please amend the paragraph at p. 5, lns. 8-17 to read as follows:

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An object of the invention is a method for transporting physical objects, wherein at least one physical object is transported from a sending station to a receiving station, wherein the transport occurs through at least one physical guide, wherein the physical guide executes a decision about further parameters of transport to another physical guide or to the receiving station, wherein information for handling and moving the physical object is generated and transferred to a logical node, wherein the information is used to handle and move the physical packets according to a handling and moving of packets in a telecommunication protocol and wherein the logical node transfers the decision to the sending station and/or at least one physical router.

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Please amend the paragraph at p. 5, lns. 19-22 to read as follows:

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It is also possible that there is a close one to one relation between routers (in the logical plane) and machines (in the physical plane) and the routers only send control information down to the machines (i.e. no information is needed from the machine to the router), since the physical packet is anyway accompanied by a logical packet.

Please amend the paragraph at p. 6, lns. 4-11 to read as follows:

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Preferably a cell switching technology is used. Asynchronous Transfer Mode (ATM) is an advantageous implementation of a cell switching technology. In ATM the switching may be done on virtual channel identification (VCI) or virtual path (VPI) base. A virtual channel is normally a connection from one source to one destination, although multicast connections are also permitted. Virtual channels are unidirectional, but a pair of circuits can be created at the same time. A group of virtual channels can be grouped together in what is called a virtual path. Conceptually, a virtual path is like a bundle of virtual channels.

Please amend the paragraph at p. 11, lns. 18-23 to read as follows:

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Embodiments of the invention provide services which are needed or helpful for package delivery by communication protocols of circuit or packet switched networks. Within advantageous implementations of the invention further specific services will be added. It is even

A11 more preferable, to supply also the specific services through communication protocols. The communication protocols are especially packet switched networks e.g. the Internet.

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Please insert at p. 11, ln. 24 the text "Brief Description of the Drawings".

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Please amend the paragraph at p. 11, lns. 25-26 to read as follows:

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A12 In the following embodiments of the invention will be further described by means of examples and by means of the figures:

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Please amend the paragraph at p. 12, lns. 6-7 to read as follows:

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A13 Fig.5 shows a schematic overview of a preferably global package delivery system.

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Please amend the paragraph at p. 12, lns. 18-22 to read as follows:

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A14 The examples make use of the idea, that these protocols - when modified - already provide the functionality needed. To achieve an efficient handling of physical objects, especially of packages, different additions may be implemented. Each of them could be combined with each of the transportation systems as described according to the Figures 1, 2.

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Please amend the paragraph at p. 12, lns. 24-25 to read as follows:

A15  
The additions are most preferably implemented in a network layer protocol header.

Examples of these additions are described hereinbelow.

Please amend the paragraph at p. 12, ln. 33 - p. 13, ln. 2 to read as follows:

A16  
Basic principles of embodiments of the invention, especially the usage of  
telecommunication protocols, logical headers and routing mechanisms apply to the transport of  
every object that can be moved.

Please amend the paragraph at p. 13, lns. 4-5 to read as follows:

A17  
The following list provides a non-exhaustive list of logistics options, for example ways to  
organise the logistics:

Please amend the paragraph at p. 13, lns. 11-14 to read as follows:

A19  
Whereas known transportation systems transport goods from small envelopes up to  
objects as big as containers or even bigger. Embodiments of the invention also allow  
transportation of goods which have not yet been considered as a part of a transportation process,  
especially a transportation chain.

Please amend the paragraph at p. 13, ln.31 - p. 14, ln. 1 to read as follows:

A19  
An advantageous implementation of an embodiment of the invention is described according to Fig. 1. Fig. 1 shows a functional schematic of the transportation system and the transport carried out within the transportation system.

Please amend the paragraph at p. 14, lns. 3-4 to read as follows:

A20  
An advantageous implementation of the transportation system and the method of transportation as it is represented in Fig. 1 includes a physical transport layer 10, a logical transport layer 20 and an application layer 30.

Please amend the paragraph at p. 14, lns. 7-19 to read as follows:

A21  
A protocol functionality R is added to the machines M that take care of the physical routing of the packages. The lowest layer 10, most preferable the physical transport plane, can be compared to the physical layer in the well known Open System Interconnection (OSI) model, since it takes care of the physical distribution of the packages. The Open System Interconnection has been proposed by the International Telecommunication Union (ITU) in the recommendation X.200. A middle layer 20, most advantageously the logical transport plane, is the layer that reuses the protocols. The middle layer 20 is the control layer and contains at least similar functions as defined for the OSI layers 2, 3, 4 and 5. The middle layer 20 performs the handling of the logical packets and connections. A top layer, especially an applications plane, contains the

A21 applications and can be compared to the OSI layers 6 and 7. The applications are administered by operators on top of Fig. 1. The operators may use web-based graphical user interfaces.

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Please amend the paragraph at p. 16, lns. 25-28 to read as follows:

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A22 A further implementation of embodiments of the invention relates to a computer integrated manufacturing company. In a computer integrated manufacturing company the routing of construction parts and tools may be done via an Intranet, based on services provided by the Internet protocols.

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Please amend the paragraph at p. 19, ln. 33 - p. 20, lns. 1-7 to read as follows:

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A23 Existing (subnet) management protocols, such as the Simple Network Management Protocol (SNMP) can be reused for the management of the networks. SNMP messages can be used to configure the routers. New information elements have to be introduced in order to be able to specify the new operations for the package routing. It may also be useful to create an interface from the router to the physical machines in order to relay the configuration messages. This would enable the configuration of the machines via e.g. the Internet and with standardised protocols (such as SNMP).

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Please amend the paragraph at p. 21, lns. 10-11 to read as follows:



A24 It is further preferable to monitor the quality of service through a suitable protocol as for example Real-Time Protocol (RTP).

Please amend the paragraph at p. 21, lns. 25-33 to read as follows:

A25 In Fig. 5 a package delivery system with suitable logistics via a Wide Area Network, such as a packet switched network as for example the Internet is presented. The packages may be transported by using any transport means between different locations. The addressing of the location may be done by means of IP addresses. Intermediate storage can be done by means of ICMP, flow control or a mechanism that only forwards the logical and the physical package after a confirmation from any machine or human interface, for example one of the operators may use a web-based interface to control the routing of the package or to do alarm handling.

Please amend the paragraph at p. 23, lns. 22-23 to read as follows:

A26 In the following, embodiments of the invention will be described by different concepts with different connections between actual machines and routing network.

Please amend the paragraph at p. 25, lns. 7-8 to read as follows:

A27 A further example relates to global transport system. In this example packages are delivered from location L1 to location L5 according to Fig. 5.

Please amend the paragraph at p. 28, lns. 14-19 to read as follows:

A29  
Note that the interface between the different locations (L1..L5) and the Internet may also be done with a laptop connected to a GSM mobile station and an Internet dial up connection. It is also possible use a WAP phone or a UMTS phone in the future. This means that it is not necessary to have physical locations that interrogate the routers in the Internet for further information. The truck driver could, for example, fetch this information at arrival in the harbour.

Please amend the paragraph at p. 30, lns. 25-27 to read as follows:

A29  
Embodiments of the invention have a wide scope, which includes a reuse of existing packet and circuit switching communication protocols, for example the different routing metrics.

Please amend the paragraph at p. 30, lns. 29-31 to read as follows:

A30  
Though embodiments of the invention are carried out with new computer programs, respectively a new computer program product, a major part of the needed software is standardised and widely deployed. This allows interoperability.

Please amend the paragraph at p. 30, ln. 33 - p. 31, ln. 1 to read as follows:

A31  
Embodiments of the invention further include the possibility to use a worldwide packet switched network such as the Internet for physical distribution of packages.